# Detailed Comments
# Citadel Project Area Draft EIS
# Black Hills National Forest
# Northern Hills Ranger District

## Alternatives

The DEIS states that the ID team internally considered (and eliminated from detailed analysis) an alternative that would not have included new road construction, limiting management actions to those areas accessible by the current road system (page 2-8). EPA supports eliminating or minimizing new road construction because roads contribute to increased stream siltation, mass movement and erosion, damaged plant habitat and increased wildlife habitat fragmentation. The DEIS states that 4.5 miles of the 18 miles of proposed new road construction is not necessary to access stands within or adjacent to the WUI areas. EPA recommends that the Forest Service consider removing those 4.5 miles from the proposed transportation system to reduce impacts from new road construction, or more clearly explain the need for that construction. Management activities could be intensified in areas already accessible by existing roads.

## Water Quality

EPA is concerned that all of the 7$^{th}$ level Watersheds in the Citadel Analysis Area are Condition Class III (Table 3-4, page 3-10). The DEIS states that those drainages are "of high concern … management activities must be done with great care" (page 3-10). The document states that watershed improvement projects must be part of the project planning, and FSM 2522.11 requires the Forest Service to "improve all Class III terrestrial ecosystems and NFS watersheds to watershed condition, Class I or Class II generally in order of watershed priority." According to the DEIS, Watershed Improvements would involve decommissioning two segments of NFS roads, approximately 0.9 miles total (page 2-7). The Post-sale Activities list includes watershed improvement projects such as bank stabilization, grass planting, removal of fill material and possible willow planting (page 2-8). EPA is concerned that decommissioning 0.9 mile of road and the other watershed improvement projects will not offset the sedimentation, soil compaction, erosion, wildlife fragmentation and water quality impacts from the project on watersheds in the Citadel Analysis Area.

The project proposes to construct 18 miles of new road, improve 35 miles of existing road and decommission 31-32 miles of non-system roads. As described in the No Action alternative, existing non-system roads "are causing resource damage by providing illegal access, contributing to stream siltation, contributing to mass movement and erosion potential, damaging plant habitat, and creating disturbance to wildlife" (page 3-28). The DEIS also mentions that motorized off-highway vehicle use on the forest is

increasing. The FEIS should clearly describe how decommissioned roads and new roads that will be closed upon completion of management activities will be rehabilitated, revegetated and restored, including how vehicle access will be blocked. Please include information in the FEIS on how water and soil resources will be protected under this revised transportation network. EPA would also like to see a commitment to monitoring in the FEIS.

For any new road construction under the action alternatives, EPA's general recommendations include:

- Minimize road construction and road density to reduce adverse impacts to watersheds
- Locate roads away from streams and riparian areas as much as possible
- Locate roads away from steep slopes or erosive soils
- Minimize road stream crossings
- Stabilize cut and fill slopes
- Provide adequate road drainage and control surface erosion with adequate waterbars, crowns, rolling dips and ditch relief culverts to promote drainage off roads or along roads
- Consider road effects on stream structure and seasonal and spawning habitats when determining alignment
- Allow for adequate large woody debris recruitment to streams and riparian buffers near streams

The DEIS states that the activities in Alternatives B and C would not adversely impact water quality or beneficial uses in the project area because management measures and BMPs would be implemented (page 3-18). It also states that mitigation measures and BMPs would prevent noticeable negative effects on soil productivity and soil nutrients (page 3-17). Please provide a list of those mitigation measures and BMPs in the Appendices, or incorporate them by reference.

Aquatic resources

The wetlands section discusses "delineation" of wetlands when it seems to mean "identification" (page 3-12). Delineation is the process by which the edge of a wetland is located. The DEIS states that, based on the National Wetlands Inventory, there are wetlands in the upper Beaver Creek area and lower in the drainage in Mill Creek, and in Bear Gulch and Higgins Gulch. However, there is no information on the wetlands' acreage or function, or other aquatic resources such as headwaters, waterways, springs, etc. The FEIS should provide a map that indicates whether and how many wetlands and other aquatic resources will be impacted by the proposed activities. It would be useful to include a map that identifies wetlands and waterways in the project area, and the proposed new roads to identify where impacts may occur.

Executive Order 11990 requires all federal land managers to protect wetlands regardless of whether or not they are jurisdictional. Wetlands impacts should be first

avoided, and then minimized to the maximum extent possible. Any unavoidable impacts should be compensated through wetland restoration, creation or enhancement. The national wetlands policy has set an interim goal of No Overall Net Loss of the Nation's remaining wetlands, and a long-term goal of increasing the quantity and quality of our wetlands resources. EPA supports the use of no-harvest buffers to wetlands, and the use of BMPs that restrict heavy equipment operation in wetlands. We also support the identification of wetlands through field visits to each treatment area, so that wetlands are clearly marked on the Sale Area Map. This will ensure that timber contractors can easily avoid impacting those aquatic resources.

Noxious weeds

The DEIS states that 80 percent of the lands administered by the Black Hills National Forest are infested with noxious weeds (page 3-62). While Appendix C – Design Criteria and Monitoring indicates that noxious weed treatments will be monitored, the DEIS does not address how the project will implement the BHNF Noxious Weed Management Plan. Please include a commitment to this plan in the FEIS. The Forest may also want to consider prevention measures including:

- vigilantly monitor and eradicate new infestations
- use certified weed-free seeds
- prevent vehicles from moving freely between infested and non-infested areas
- thoroughly clean the undercarriage of any vehicles or machinery coming into a treatment area
- permit animals to graze weeds only before they flower and set seed
- minimize soil disturbance caused by water, livestock, vehicles or machinery
- create, maintain and monitor boundary strips between infested and non-infested areas
- use good land management practices such as rotational grazing, water conservation, erosion control, revegetation and maintenance of competitive vegetation that can withstand weed invasion.

Wildlife habitat

EPA supports Forest Service consultation with the U.S. Fish and Wildlife Service, the South Dakota Game, Fish and Parks Department and the Wyoming Department of Environmental Quality to reduce and mitigate adverse fish and wildlife impacts. Appendix B provides some information on design criteria for different wildlife species and their habitats, and other project activities. Appendix C identifies additional monitoring objectives/items for particular resource monitoring needs including hydrology and soils, sensitive plants, noxious weeds and fuels. These documents provide good summaries of the standards and objectives the Forest intends to meet, consistent with Forest Plan direction, and monitoring protocols that have been established for various resources. However, EPA is concerned that there are no identified targets or thresholds which would signify when management actions would be modified to ensure wildlife and other resources are adequately protected.

We encourage the Forest to consider using an adaptive management approach for the bald eagle, the six wildlife species on Region 2's Sensitive Species list, and the 10 sensitive wildlife species with potential habitat in the project area (page 3-68). An effective adaptive management approach would include a strong commitment to monitoring to ensure that the project is meeting objectives and mitigating impacts to habitat. It would also include:

- a decision tree with clear objectives to guide future decisions
- targets/thresholds that specify a desired future condition
- trends specifying a desired change relative to the current condition, especially when trend is more important than condition, or information is lacking to describe future condition
- specific decision thresholds with identified indicators for each impacted resource
- a monitoring plan with protocols to assess whether thresholds are being met
- a firm commitment to use monitoring results to modify management actions as necessary.

Botanical areas

Three designated botanical areas exist partially or wholly within the Citadel project area, representing 4.024 acres of the NFS lands in the project area (page 1-14). Although the DEIS states that "the opportunity exists" to minimize impacts to those areas and avoid degrading their biological integrity, there are no maps or site-specific indicators showing if the proposed management activities will avoid those botanical areas. Botanical areas are also not included in Appendix C – Design Criteria and Monitoring, so it does not appear that management requirements will be applied to activities in those areas. Please provide information in the FEIS indicating how impacts to those resources will be avoided, minimized or mitigated.